# MAYA 几何 [八级] 周测试卷

*Geometry Level 8 · Weekly Check*

范围：2026/11/02–11/08 学习内容 ｜ 重点：三角形不等关系、圆的弦性质、平行四边形应用、角度推导 ｜ 共 20 题 · 每题 5 分 · 满分 100 分

姓名 Name：_____　　日期 Date：_____　　得分 Score：_____ / 100

**说明：**共 20 道单项选择题，每题只有一个正确答案，请把答案字母填在题前括号内。建议用时 40 分钟，可以使用草稿纸，不要求写出过程。

Choose the best answer for each question and write the letter in the brackets. Suggested time: 40 minutes. Working paper is allowed.

## Part A　基础与定理　Foundations & Theorems · Q1–Q4

( ) **1.** It is known that if $x + y = 10$, then $x + y + z = 10 + z$. Which of Euclid's axioms does this statement illustrate?

**A.** Fourth Axiom　　**B.** First Axiom

**C.** Second Axiom　　**D.** Third Axiom

( ) **2.** How many straight lines can be drawn through two distinct points?

**A.** None　　**B.** Two

**C.** Infinitely many　　**D.** Exactly one

( ) **3.** What is the sum of the interior angles of a quadrilateral?

**A.** 360°　　**B.** 180°

**C.** 270°　　**D.** 540°

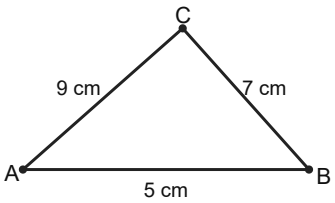
( ) **4.** In $\triangle ABC$, P and Q are the midpoints of AB and AC respectively. If BC = 14 cm, find the length of PQ.

**A.** 14 cm　　**B.** 7 cm

**C.** 21 cm　　**D.** 28 cm

## Part B　三角形中的不等关系　Inequalities in a Triangle · Q5–Q8

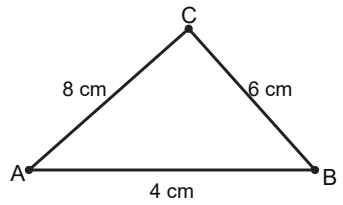
( ) **5.** In $\triangle ABC$, AB = 5 cm, BC = 7 cm and CA = 9 cm. Which angle is the largest?




**A.** $\angle B$　　**B.** $\angle A$

**C.** $\angle C$　　**D.** Cannot be determined

( ) **6.** In △ABC, AB = 4 cm, BC = 6 cm and CA = 8 cm. Which angle is the smallest?




**A.** ∠A **B.** ∠C

**C.** ∠B **D.** Cannot be determined

( ) **7.** In △ABC, AB = 7 cm and BC = 5 cm. Which of the following could be the length of AC?

**A.** 2 cm **B.** 12 cm

**C.** 10 cm **D.** 13 cm

( ) **8.** In △ABC, ∠A = 50° and ∠B = 70°. Which side is the longest?

**A.** AB **B.** BC

**C.** Cannot be determined **D.** AC

## Part C 平行线与角度推导 Parallel Lines & Angle Chains · Q9–Q12

( ) **9.** AB and CD are parallel lines cut by a transversal. If one of a pair of co-interior angles is 115°, what is the other angle?

**A.** 65° **B.** 55°

**C.** 115° **D.** 125°

( ) **10.** Two co-interior angles formed by a transversal cutting parallel lines are $(2x + 10)°$ and $(3x - 20)°$. Find x.

**A.** 34 **B.** 42

**C.** 46 **D.** 38

( ) **11.** In △PQR, PQ = PR and ∠Q = 65°. Find ∠P.

**A.** 40° **B.** 65°

**C.** 50° **D.** 115°

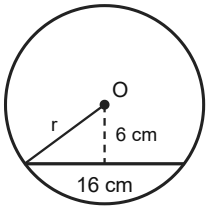
( ) **12.** In △ABC, ∠A = 48° and ∠B = 72°. CD bisects ∠C and meets AB at D. Find ∠ACD.

**A.** 30° **B.** 24°

**C.** 36° **D.** 60°

## Part D 圆的弦性质 Chord Properties of Circles · Q13–Q16

( ) **13.** A chord of a circle is 16 cm long and its distance from the centre is 6 cm. Find the radius of the circle.

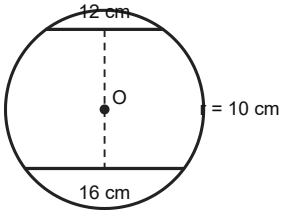


O to chord is perpendicular

**A.** 8 cm **B.** 10 cm

**C.** 12 cm **D.** 14 cm

( ) **14.** Two parallel chords of lengths 12 cm and 16 cm lie on opposite sides of the centre of a circle of radius 10 cm. Find the distance between the two chords.




**A.** 2 cm **B.** 6 cm

**C.** 14 cm **D.** 8 cm

( ) **15.** AB and AC are two chords of a circle such that AB = 2AC. Their distances from the centre are 3 cm and 6 cm respectively. Using $\pi = 3$, find the area of the circle.

**A.** 120 cm² **B.** 144 cm²

**C.** 150 cm² **D.** 135 cm²

( ) **16.** A chord of a circle is 24 cm long and its distance from the centre is 5 cm. Find the diameter of the circle.

**A.** 26 cm **B.** 13 cm

**C.** 24 cm **D.** 34 cm

## Part E 圆周角与四边形 Angles in Circles & Quadrilaterals · Q17–Q20

( ) **17.** An arc of a circle subtends an angle of 70° at the centre. What angle does the same arc subtend at a point on the remaining part of the circle?

**A.** 20° **B.** 35°

**C.** 70° **D.** 140°

( ) **18.** ABCD is a cyclic quadrilateral. If $\angle A = 78°$, find $\angle C$.

**A.** 78° **B.** 92°

**C.** 102° **D.** 112°

( ) **19.** The perimeter of a parallelogram is 156 cm. If one side exceeds the other side by 16 cm, what are the lengths of its sides?

**A.** 31 cm, 15 cm
**B.** 31 cm, 47 cm
**C.** 39 cm, 55 cm
**D.** 34 cm, 50 cm

( ) **20.** The perimeter of a parallelogram is 196 cm. If one side exceeds the other side by 8 cm, what are the lengths of its sides?

**A.** 46 cm, 54 cm
**B.** 45 cm, 37 cm
**C.** 49 cm, 57 cm
**D.** 45 cm, 53 cm

## 答题卡 Answer Sheet 请把 1–20 题的答案字母填入对应格内

| | | | | |
|---|---|---|---|---|
| 1. _____ | 2. _____ | 3. _____ | 4. _____ | 5. _____ |
| 6. _____ | 7. _____ | 8. _____ | 9. _____ | 10. _____ |
| 11. _____ | 12. _____ | 13. _____ | 14. _____ | 15. _____ |
| 16. _____ | 17. _____ | 18. _____ | 19. _____ | 20. _____ |